

DOCUMENT RESUME

ED 369 897

CE 066 249

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TITLE Survey of Attitudes toward the Indiana Higher Education Telecommunication System (IHETS Delivery System).  
PUB DATE 93  
NOTE 63p.  
PUB TYPE Reports - Research/Technical (143) -- Statistical Data (110)  
  
EDRS PRICE MF01/P\*\*\* Plus Postage.  
DESCRIPTORS \*Distance Education; Educational Administration; Health Education; Higher Education; Industrial Education; Information Technology; \*Instructional Systems; Nontraditional Education; Safety Education; Student Attitudes; Technology Education; \*Telecommunications  
IDENTIFIERS \*Indiana Higher Education Telecommunications System

## ABSTRACT

A study surveyed the opinions of 152 Indiana State University (ISU) students who had taken courses delivered on the Indiana Higher Education Telecommunication System (IHETS). Of the 365 questionnaires mailed to students enrolled in educational administration, industrial technology education, and health and safety, 45.51 percent were returned. Measures of central tendency, chi-square, and one-way analysis of variance were used to analyze data. Data supported the conclusion that IHETS was a viable alternative to "traditional" off-campus classes. The educational goals of 71% of respondents depended on the IHETS delivery system. Respondents believed the IHETS delivery system should be used to promote the majors (86.9 percent) and they would recommend programs that were at least partially delivered by IHETS (87.5 percent). Data supported the conclusion that IHETS courses provided learning experiences equal to other classes. However, respondents reported interactions in the class needed to be improved. They were positive about the methods and treatment students received in the IHETS classes and believed that their relationship with instructors and ISU was very positive and that ISU had made a commitment to delivery of quality programs. Respondents' opinions were not affected by their gender but were affected by number of courses taken and distance traveled to get to an on-site class. On a self-rating scale, respondents rated themselves as very supportive of the IHETS delivery system. (YLB)

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**SURVEY OF ATTITUDES TOWARD THE INDIANA  
HIGHER EDUCATION TELECOMMUNICATION SYSTEM  
(IHETS DELIVERY SYSTEM)**

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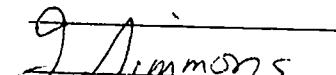
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**Survey of Attitudes Toward the  
Indiana Higher Education Telecommunication System  
(IHETS Delivery System)**

Vocational Education courses have traditionally been delivered to distance sites by instructors who travel to the sites and deliver "on site" instructions. This method is not an effective expenditure of faculty time and departmental budgets. While it is necessary to maintain direct contact with students, the Indiana Higher Education Telecommunication System (IHETS) provides an alternative for delivering distance education classes. It is not the purpose of this paper to discuss the advantages and disadvantages of the IHETS delivery system. However, many of these will become apparent through reporting and discussing the data.

The classes meet on a weekly basis. However, because the time is limited on the IHETS Network, it is necessary to provide other experiences to meet the forty-five contact hours required for a three semester hour course. Therefore, most IHETS classes meet one or more times on campus or at a centrally located site. The IHETS classes provide for interaction between students and the instructor and student and student; and the Saturday classes provide for face-to-face interaction.

This is an expanded replicate study conducted by Simmons (Jan. 1991) which includes programs at Indiana State University (ISU) offering IHETS delivered classes. This survey included Educational Administration (EA), Industrial Technology Education (ITE), and Health and Safety (HS).

**Problem Statement**

The purpose for this research was to survey Indiana State University students, who had taken courses delivered on IHETS, opinions of the IHETS distant education delivery system.

To accomplish the objectives for this study, nine questions were proposed. (Table 1, p. 7)

1. Did students, who have taken IHETS (T.V.) classes, perceive the IHETS delivered classes to be a viable alternative to traveling to distant, off campus classes with an on-site instructor?
2. Did participants compare their experiences in IHETS (T.V.) delivered classes favorably with other delivery systems?
3. Did participants have a positive perception of their relationship with the instructor/institution?
4. Did males perceive their experience(s) in IHETS classes different from females?
5. Did the number of IHETS courses the responder had taken, one vs. two or more, affect their attitude toward taking IHETS classes?
6. Did the distance participants had to travel to get to an IHETS downsite (location), 0 to 10 miles vs. 10 or more miles, affect their opinions of the IHETS delivery system?
7. Did the distance participants had to travel to get to a traditional class with an on-site instructor, 0 to 10 miles vs. 10 or more miles, affect their opinion of the IHETS delivery system?
8. Did participants' place of employment significantly affect their opinion of IHETS (T.V.) taught classes, e.g., post-secondary education institutions, Secondary Education, Department of Corrections and business/industry/government?
9. Did the program in which participants were enrolled affect their opinions of the IHETS delivery system?

Table 1

## Frequency Distribution On Demographic Variables

Variable		N	Percent		N	Percent	Missing Case
Sex:	Males	95	62.5	Females	56	36.8	1(.7)
Courses:	One	67	44.1	Two or more	79	52.0	6(3.9)
Distance Traveled: (TO IHETS Class)	0-10 miles	90	59.2	10 or more miles	61	40.1	1(.7)
Distance Traveled: (To On Site Class)	0-10 miles	24	14.9	10 or more	127	83.6	1(.7)
Place of Employment:	Post-Second.	39	25.7	All Others	112	73.7	1(.7)
	Secondary	35	23.0	All Others	116	76.4	1(.7)
	Industry	48	31.6	All Others	103	67.8	1(.7)
	Other	29	19.1	All Others	122	80.3	1(.7)
Program:	Ed. Admin.	29	19.1	HS + ITE	123	80.9	0
	ITE	61	40.1	EA + ITE	91	59.9	0
	HS	62	40.8	EA + HS	90	59.2	0

Total N = 152

## Methods

### Subjects (N=152)

Students enrolled in Education Administration, Industrial Technology Education, and Health and Safety at Indiana State University, who had taken one or more courses delivered on IHETS since the Fall of 1987, had an opportunity to participate in this study. The total population (N=365) was mailed an opinionnaire with a stamped, returned addressed envelope. Thirty-one, 8.49 percent of the opinnonaires were not delivered because the addresses were incorrect. Three hundred and thirty-four opinnonaires were delivered, and 45.51 percent of the opinionnaires delivered were returned (N=152).

### The Opinionnaire

The opinionnaire was a closed form instrument. Respondents were asked to check an item from a list of suggested responses, e.g. SA = strongly agree to SD = strongly disagree. The list of items was designed to answer the questions proposed for this study. The items were given to a group of professors who had experience in research and/or test and measurement. The group of experts answered the following question, "do these items sample a significant aspect of the questions proposed?" The items were refined or replaced and the questionnaire was assembled.

The instrument was given a "pilot test" and refined. Simmons (Jan, 1991) used the instrument in a previous study. However, the instrument has been refined and the response format changed. Therefore, when the data were reduced and analyzed new statistical data were run on the refined instrument.

An estimate of internal consistency using Cronbach's Alpha yielded a coefficient of reliability .9579. A split half method was used to determine internal consistency for the

opinionnaire. The scores on the odd numbered items were correlated with the scores on the even numbered items. The total number of items was 29 (15 items in part 1; 14 items in part 2). The reliability coefficients between Part 1 and Part 2 using the unequal length Spearman-Brown prophecy formula was .9676. The Cronbach Alpha for consistency within groups was .9093 for Part 1 and .9173 for Part 2. This method yields lower correlation because of the reduction in size to two tests of half the number of items.

### Procedures

1. The questionnaire "User's Opinions of T.V. (IHETS) Classes" (Simmons, Jar. 1991) was refined.
2. A list of names and addresses was assembled to include Education Administration (EA), Health and Safety (HS), and Industrial Technology Education (ITE) students who have taken IHETS (T.V.) delivered courses since the Fall 1987.
3. A mailing was prepared. A numbering machine was used to number the opinionnaires, return envelopes, and mailing list. This system assisted the researchers to determine which responses had been returned. This would assist the researchers to follow-up nonrespondents. Also, we were able to assign responses to categories to facilitate data analysis.
4. A date was set by which time all opinionnaires must be returned.
5. The opinionnaires were given to the testing center with instructions on what data will be needed for analysis and the way the data should be grouped. The data analysis techniques were discussed with a research consultant in the testing center.

6. The data printout was discussed with a research consultant in the testing center.
7. The data were analyzed and the report was prepared.

### Analysis

Measures of central tendency, Chi-square, and one-way Analysis of Variance (ANOVA) were used to analyze the data.

### Results

The results of the data are presented in narrative and tabular form. The tables will be numbered and lettered; for example 2a, 2b, 2c, and 2d. The table lettered "a" will always refer to All Respondents (AR); the letter "b" will always refer to Education Administration (EA); the letter "c" will always refer to Industrial Technology Education (ITE), and the letter "d" will always refer to Health and Safety (HS).

Tables 2a-2d presents the "Frequency Data on Respondent's Perceptions of IHETS as a Viable Alternative." The total number who agree, disagree or who are undecided are presented. In the same cell with the actual number reported for that cell, the percentage of total N represented by the real number are presented. Valid cases and missing cases are also reported for each statement. The format for all frequency tables are the same as the format for Tables 2a-2d. Tables 3a-3d presents the "Frequency Data on Respondents Comparing IHETS Courses With Other Courses." Tables 4a-4d presents the "Frequency Data Comparing Instructors/Institution Student Relations."

Tables 5-11 presents the results of Chi-Square Analyses. Table 5 presents the "Results of Chi-Square Analysis Comparing Female Respondent's with Male Respondent's Perception of the IHETS Delivery System Over All Items." If there exist no significant (NS) differences on any item for any group an asterisk (\*) was placed in the NS column. For

Table 2a

## Frequency Data on All Respondents Perception of IHETS as a Viable Alternative

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
Enrollment in IHETS courses will increase in the future	117 (77.0%)	9 (12.5%)	16 (10.5%)	152 (100%)	0
Few courses which I took were more successful than the IHETS courses(s)	66 (43.4%)	40 (26.3%)	46 (30.3%)	152 (100%)	0
I would use the IHETS delivery system to sell my major program	132 (86.9%)	7 (4.6%)	12 (7.9%)	151 (99.3%)	1 (.7%)
If asked I would recommend the programs at ISU which are at least partially taught on IHETS	133 (87.5%)	6 (3.9%)	10 (6.6%)	149 (98.0%)	3 (2.0%)
On the whole students taking IHETS classes are satisfied	128 (84.2%)	5 (3.3%)	17 (11.2%)	150 (98.7%)	2 (1.3%)
I feel that the IHETS classes should be continued	140 (92.1%)	4 (2.7%)	6 (3.9%)	150 (98.7%)	2 (1.3%)
Generally speaking I believe that IHETS courses are a good alternative to "traditional field based" courses	141 (92.7%)	5 (3.3%)	4 (2.6%)	150 (98.7%)	2 (1.3%)

N = 152, percentages are based on total N, not valid cases

Table 2a (cont.)

## Frequency Data on All Respondents Perception of IHETS as a Viable Alternative

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
The outcome of my educational goal(s) depend on IHETS.	108 (71.5%)	26 (17.1%)	14 (9.2%)	148 (97.4%)	4 (2.6%)
IHETS delivery of classes is one of the most promising instructional technologies in education today.	114 (75.0%)	31 (20.0%)	27 (17.8%)	150 (98.7%)	2 (1.3%)
The advantages of IHETS courses far outweigh the disadvantages.	127 (83.5%)	10 (6.6%)	13 (8.6%)	150 (98.7%)	2 (1.3%)
IHETS courses force me to be efficient in my school work.	66 (43.2%)	31 (23.0%)	49 (32.2%)	150 (98.7%)	2 (1.3%)
IHETS classes have their drawbacks but I like them.	133 (87.5%)	8 (5.3%)	10 (6.6%)	151 (99.3%)	1 (.7%)
My likes and dislikes for IHETS courses balance one another	110 (72.4%)	21 (13.8%)	18 (11.8%)	149 (98.0%)	3 (2.0%)
Generally the IHETS delivery system worked well.	133 (87.5%)	10 (6.6%)	8 (5.3%)	151 (99.4%)	1 (.6%)
IHETS delivery did/does save me time and money.	133 (87.5%)	8 (5.3%)	11 (7.2%)	152 (100%)	0

N = 152, percentages are based on total N, not valid cases.

Table 2b

## Frequency Data on Education Administration Respondents Perception of IHETS as a Viable Alternative

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
Enrollment in IHETS courses will increase in the future	17 (58.6%)	9 (31.0%)	3 (10.3%)	29 (100%)	0
Few courses which I took were more successful than the IHETS courses(s)	12 (41.4%)	11 (37.9%)	6 (20.7%)	29 (100%)	0
I would use the IHETS delivery system to sell my major program	21 (72.4%)	5 (17.2%)	2 (6.9%)	28 (96.5%)	1 (3.5%)
If asked I would recommend the programs at ISU which are at least partially taught on IHETS	22 (75.8%)	2 (6.9%)	3 (10.3%)	27 (93.1%)	2 (6.9%)
On the whole students taking IHETS classes are satisfied	20 (68.9%)	4 (13.7%)	3 (10.3%)	27 (93.1%)	2 (6.9%)
I feel that the IHETS classes should be continued	21 (72.4%)	2 (6.8%)	4 (13.8%)	27 (93.1%)	2 (6.9%)
Generally speaking I believe that IHETS courses are a good alternative to "traditional field based" courses	23 (79.3%)	3 (10.3%)	1 (3.4%)	27 (93.1%)	2 (6.9%)

N = 29, percentages are based on total N, not valid cases.

Table 2b Cont.

## Frequency Data on Education Administration Respondents Perception of IHETS as a Viable Alternative

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
The outcome of my educational goal(s) depend on IHETS.	15 (51.7%)	9 (31.0%)	3 (10.3%)	27 (93.1%)	2 (6.9%)
IHETS delivery of classes is one of the most promising instructional technologies in education today.	15 (51.7%)	7 (24.1%)	5 (17.2%)	27 (93.1%)	2 (6.9%)
The advantages of IHETS courses far outweigh the disadvantages.	19 (65.5%)	4 (13.8%)	4 (13.8%)	27 (93.1%)	2 (6.9%)
IHETS courses force me to be efficient in my school work.	8 (27.5%)	13 (44.8%)	6 (20.7%)	27 (93.1%)	2 (6.9%)
IHETS classes have their drawbacks but I like them.	23 (79.3%)	38 (10.3%)	3 (10.3%)	29 (100%)	0
My likes and dislikes for IHETS courses balance one another	17 (58.6%)	7 (24.1%)	4 (13.8%)	28 (96.5%)	1 (3.5%)
Generally the IHETS delivery system worked well.	24 (82.7%)	4 (13.8%)	1 (3.4%)	29 (100%)	0
IHETS delivery did/does save me time and money.	26 (89.7%)	1 (3.4%)	2 (6.9%)	29 (100%)	0

N = 29, percentages are based on total N, not valid cases.

Table 2c

Frequency Data on Industrial Technology Education Respondents Perception of IHETS as a Viable Alternative

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
Enrollment in IHETS courses will increase in the future	50 (80.7%)	6 (9.7%)	6 (9.7%)	62 (100%)	0
Few courses which I took were more successful than the IHETS courses(s)	30 (48.4%)	14 (22.6%)	18 (29.0%)	62 (100%)	0
I would use the IHETS delivery system to sell my major program	55 (88.7%)	2 (3.2%)	5 (8.1%)	62 (100%)	0
If asked I would recommend the programs at ISU which are at least partially taught on IHETS	55 (88.7%)	3 (4.8%)	4 (6.5%)	62 (100%)	0
On the whole students taking IHETS classes are satisfied	53 (85.5%)	0	9 (14.5%)	62 (100%)	0
I feel that the IHETS classes should be continued	58 (93.6%)	2 (3.2%)	2 (3.2%)	62 (100%)	0
Generally speaking I believe that IHETS courses are a good alternative to "traditional field based" courses	58 (93.6%)	2 (3.2%)	2 (3.2%)	62 (100%)	0

N = 63, percentages are based on the total N, not valid cases.

Table 2c Cont.

## Frequency Data on Industrial Technology Education Respondents Perception of IHETS as a Viable Alternative

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
The outcome of my educational goal(s) depend on IHETS.	59 (80.7%)	7 (11.3%)	3 (4.8%)	60 (96.8%)	2 (3.2%)
IHETS delivery of classes is one of the most promising instructional technologies in education today.	52 (83.9%)	1 (1.6%)	9 (14.5%)	62 (100%)	0
The advantages of IHETS courses far outweigh the disadvantages.	53 (85.5%)	4 (6.5%)	5 (8.1%)	62 (100%)	0
IHETS courses force me to be efficient in my school work.	26 (41.9%)	13 (21.0%)	23 (37.1%)	62 (100%)	0
IHETS classes have their drawbacks but I like them.	53 (85.5%)	4 (6.5%)	5 (8.1%)	62 (100%)	0
My likes and dislikes for IHETS courses balance one another	46 (74.2%)	8 (12.9%)	8 (12.9%)	62 (100%)	0
Generally the IHETS delivery system worked well.	55 (88.7%)	4 (6.5%)	3 (4.8%)	62 (100%)	0
IHETS delivery did/does save me time and money.	55 (88.7%)	41 (6.5%)	3 (4.8%)	62 (100%)	0

N = 62, percentages are based on total N, not valid cases.

Table 2d

## Frequency Data on Health and Safety Respondents Perception of IHETS as a Viable Alternative

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
Enrollment in IHETS courses will increase in the future	50 (81.9%)	4 (6.5%)	7 (11.5%)	61 (100%)	0
Few courses which I took were more successful than the IHETS courses(s)	24 (39.3%)	15 (24.6%)	22 (36.1%)	61 (100%)	0
I would use the IHETS delivery system to sell my major program	56 (91.8%)	0	5 (8.2%)	61 (100%)	0
If asked I would recommend the programs at ISU which are at least partially taught on IHETS	56 (91.8%)	1 (1.6%)	3 (4.9%)	60 (98.4%)	1 (1.6%)
On the whole students taking IHETS classes are satisfied	55 (90.2%)	1 (1.6%)	3 (8.2%)	61 (100%)	0
I feel that the IHETS classes should be continued	61 (100%)	0	0	61 (100%)	0
Generally speaking I believe that IHETS courses are a good alternative to "traditional field based" courses	60 (98.4%)	0	1 (1.6%)	61 (100%)	0

N = 61, percentages are based on the total N, not valid cases.

Table 3a

## Frequency Data on All Respondents Comparing IHETS Courses With Other Courses

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
I feel that IHETS courses provide learning experiences equal to other courses.	106 (69.7%)	30 (19.8%)	16 (10.5%)	152 (100%)	0
Evaluation and feedback techniques used in IHETS courses are equivalent to other courses.	102 (67.1%)	31 (20.4%)	19 (12.5%)	152 (100%)	0
Interaction between students and IHETS instructors is equal to the interactions in other classes.	77 (40.7%)	58 (38.2%)	17 (11.2%)	152 (100%)	0
Interaction(s) between/ among student(s) and student(s) in IHETS courses is/are equal to interaction(s) in other courses.	52 (34.2%)	81 (53.3%)	18 (11.8%)	151 (99.3%)	1 (.7%)
Methods used in IHETS courses are as effective those used in other courses.	109 (71.7%)	16 (10.5%)	25 (16.4%)	150 (98.7%)	2 (1.3%)
I felt as comfortable in IHETS classes as I do in traditional classes.	128 (84.2%)	11 (7.2%)	12 (7.9%)	151 (99.3%)	1 (.7%)

N = 152, percentages are based on total N, not valid cases.

Table 3b

## Frequency Data on Education Administration Respondents Comparing IHETS Courses With Other Courses

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
I feel that IHETS courses provide learning experiences equal to other courses.	16 (55.2%)	9 (31.0%)	4 (13.8%)	29 (100%)	0
Evaluation and feedback techniques used in IHETS courses are equivalent to other courses.	15 (51.7%)	11 (37.9%)	3 (10.3%)	29 (100%)	0
Interaction between students and IHETS instructors is equal to the interactions in other classes.	10 (34.5%)	16 (55.1%)	3 (10.3%)	29 (100%)	0
Interaction(s) between/among student(s) and student(s) in IHETS courses is/are equal to interaction(s) in other courses.	7 (24.1%)	19 (65.5%)	2 (6.9%)	28 (96.6%)	1 (3.4%)
Methods used in IHETS courses are as effective those used in other courses.	16 (55.1%)	6 (20.6%)	5 (17.2%)	27 (93.1%)	2 (6.9%)
I felt as comfortable in IHETS classes as I do in traditional classes.	23 (79.3%)	4 (13.7%)	2 (6.9%)	29 (100%)	0

N = 29, percentages are based on total N, not valid cases.

Table 3c

## Frequency Data on Industrial Technology Education Respondent's Comparing IHETS Courses With Other Courses

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
I feel that IHETS courses provide learning experiences equal to other courses.	42 (67.7%)	14 (22.6%)	6 (9.7%)	62 (100%)	0
Evaluation and feedback techniques used in IHETS courses are equivalent to other courses.	45 (72.6%)	12 (19.3%)	5 (8.1%)	62 (100%)	0
Interaction between students and IHETS instructors is equal to the interactions in other classes.	32 (51.6%)	21 (33.9%)	9 (14.5%)	62 (100%)	0
Interaction(s) between/ among student(s) and student(s) in IHETS courses is/are equal to interaction(s) in other courses.	17 (27.4%)	37 (59.7%)	8 (12.9%)	62 (100%)	0
Methods used in IHETS courses are as effective those used in other courses.	42 (67.7%)	6 (9.7%)	14 (22.6%)	62 (100%)	0
I felt as comfortable in IHETS classes as I do in traditional classes.	48 (77.4%)	6 (9.7%)	7 (11.7%)	61 (98.4%)	1 (1.6%)

N = 62, percentages based on total N, not valid cases.

Table 3d

## Frequency Data on Health and Safety Respondents Comparing IHETS Courses With Other Courses

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
I feel that IHETS courses provide learning experiences equal to other courses.	58 (78.7%)	7 (11.5%)	6 (9.8%)	61 (100%)	0
Evaluation and feedback techniques used in IHETS courses are equivalent to other courses.	42 (68.9%)	8 (13.1%)	11 (18.0%)	61 (100%)	0
Interaction between students and IHETS instructors is equal to the interactions in other classes.	35 (64.4%)	21 (34.4%)	5 (8.2%)	61 (100%)	0
Interaction(s) between/ among student(s) and student(s) in IHETS courses is/are equal to interaction(s) in other courses.	28 (45.9%)	25 (41.0%)	8 (13.1%)	61 (100%)	0
Methods used in IHETS courses are as effective those used in other courses.	51 (83.6%)	4 (6.6%)	6 (9.8%)	6 (100%)	0
I felt as comfortable in IHETS classes as I do in traditional classes.	57 (93.5%)	1 (1.6%)	3 (4.9%)	61 (100%)	0

N = 61, percentages are based on total N, not valid cases.

Table 4a

## Frequency Data on All Respondents Comparing Instructor/Institutional Student Relations

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
ISU has made a commitment to delivery quality programs.	135 (88.8%)	6 (3.9%)	11 (7.2%)	152 (100%)	0
Instructional relationships between the instructors of the IHETS courses and students are good.	128 (84.2%)	10 (6.6%)	12 (7.9%)	150 (98.7%)	2 (1.3%)
Students taking IHETS classes are treated equal to students in traditional classes.	127 (83.5%)	11 (7.3%)	12 (7.9%)	150 (98.7%)	2 (1.3%)
In receiving instructional materials, IHETS students needs are given equal consideration to other students.	119 (78.3%)	17 (11.2%)	14 (9.2%)	150 (98.7%)	2 (1.3%)
Participants in IHETS classes were encouraged to participate in discussions.	135 (88.8%)	11 (7.3%)	6 (3.9%)	152 (100%)	0
The pace of the instructions fit well within the time allocated.	137 (90.1%)	10 (6.6%)	5 (3.3%)	152 (100%)	0
IHETS instructors did a good job as facilitator as well as an instructor.	130 (85.5%)	11 (7.2%)	10 (6.6%)	151 (99.3%)	1 (.7%)
Biographical sketches and pictures would help me get to know people at other sites.	81 (53.3%)	26 (17.1%)	43 (28.3%)	150 (98.7%)	2 (1.3%)

N = 152, percentages are based on total N, not valid cases.

Table 4b

## Frequency Data on Education Administration Respondents Comparing Instructor/Institutional Student Relations

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
ISU has made a commitment to delivery quality programs.	26 (89.6%)	2 (6.9%)	1 (3.4%)	29 (100%)	0
Instructional relationships between the instructors of the IHETS courses and students are good.	24 (75.8%)	3 (10.3%)	2 (6.9%)	27 (93.1%)	2 (6.9%)
Students taking IHETS classes are treated equal to students in traditional classes.	23 (79.3%)	3 (10.3%)	1 (3.4%)	27 (93.1%)	2 (6.9%)
In receiving instructional materials, IHETS students needs are given equal consideration to other students.	21 (72.4%)	4 (13.7%)	2 (6.9%)	27 (93.1%)	2 (6.9%)
Participants in IHETS classes were encouraged to participate in discussions.	27 (93.1%)	1 (3.4%)	1 (3.4%)	29 (100%)	0
The pace of the instructions fit well within the time allocated.	25 (86.2%)	3 (10.3%)	1 (3.4%)	29 (100%)	0
IHETS instructors did a good job as facilitator as well as an instructor.	25 (86.2%)	0	3 (10.3%)	28 (96.6%)	1 (3.4%)
Biographical sketches and pictures would help me get to know people at other sites.	13 (44.8%)	7 (24.1%)	9 (31.0%)	29 (100%)	0

N = 29, percentages are based on total N, not valid cases.

Table 4c

## Frequency Data on Health and Safety Respondents Comparing Instructor/Institutional Student Relations

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
ISU has made a commitment to delivery quality programs.	54 (88.5%)	2 (3.3%)	5 (8.2%)	61 (100%)	0
Instructional relationships between the instructors of the IHETS courses and students are good.	54 (88.5%)	2 (3.3%)	5 (8.2%)	61 (100%)	0
Students taking IHETS classes are treated equal to students in traditional classes.	51 (83.6%)	3 (4.9%)	7 (11.5%)	61 (100%)	0
In receiving instructional materials, IHETS students needs are given equal consideration to other students.	47 (77.1%)	8 (13.1%)	6 (9.8%)	61 (100%)	0
Participants in IHETS classes were encouraged to participate in discussions.	52 (85.2%)	6 (9.9%)	3 (4.9%)	61 (100%)	0
The pace of the instructions fit well within the time allocated.	56 (91.8%)	2 (3.3%)	3 (4.2%)	61 (100%)	0
IHETS instructors did a good job as facilitator as well as an instructor.	52 (85.2%)	4 (6.5%)	5 (8.2%)	61 (100%)	0
Biographical sketches and pictures would help me get to know people at other sites.	32 (52.2%)	13 (21.3%)	16 (26.2%)	61 (100%)	0

N = 61, percentages are based on total N, not valid cases.

Table 4d

## Frequency on Data On Industrial Technology Education Respondents Comparing Instructor/Institutional Student Relations

Statement	Agree	Disagree	Undecided	Valid Cases	Missing
ISU has made a commitment to delivery quality programs.	55 (88.7%)	2 (3.2%)	5 (8.1%)	62 (100%)	0
Instructional relationships between the instructors of the IHETS courses and students are good.	52 (83.9%)	5 (8.1%)	5 (8.1%)	62 (100%)	0
Students taking IHETS classes are treated equal to students in traditional classes.	53 (85.5%)	5 (8.1%)	4 (6.5%)	62 (100%)	0
In receiving instructional materials, IHETS students needs are given equal consideration to other students.	51 (82.2%)	5 (8.1%)	6 (9.7%)	62 (100%)	0
Participants in IHETS classes were encouraged to participate in discussions.	56 (90.3%)	4 (6.5%)	2 (3.2%)	62 (100%)	0
The pace of the instructions fit well within the time allocated.	56 (90.3%)	5 (8.1%)	1 (1.6%)	62 (100%)	0
IHETS instructors did a good job as facilitator as well as an instructor.	53 (85.5%)	7 (11.3%)	2 (3.2%)	62 (100%)	0
Biographical sketches and pictures would help me get to know people at other sites.	32 (51.8%)	6 (9.7%)	18 (29.0%)	60 (96.8%)	2 (3.2%)

N = 62, percentages are based on total N, not valid cases.

Table 5

Results of Chi-Square Analysis Comparing All Female Respondents with All Male Respondents Perception of the IHETS Delivery Over All Items

Items	Significance		NS
	p≤.01	p≤.05	
Biographical sketches and pictures would help me get to know people at other sites.			*
If I were now considering a graduate or undergraduate program, I would consider a program which delivers many of the courses by T.V. a good choice. (IHETS)		HS <sup>3</sup>	AR <sup>1</sup> ITE <sup>2</sup> EA <sup>4</sup>
There are few courses which I would consider to be more successful than the T.V. (IHETS) course(s) I took.			*
If I were telling a stranger about college programs, I would mention that Indiana State University offers programs in which many of the courses are delivered by T.V. (IHETS) as a selling point.		EA	AR ITE HS
I feel that the T.V. (IHETS) course(s) provide learning experiences equal to traditional courses.			*
Compared to the evaluation techniques used in traditional classes, the evaluation and feedback techniques used in the T.V. (IHETS) courses are equal.			*
I think the interactions between students and instructors in T.V. (IHETS) classes are equal to the interaction in traditional classes.			*
Compared to traditional classes, I believe that the interactions between students and students are equal.			*
I feel that Indiana State University has made a commitment to deliver quality programs to all who want them, need them, and can profit from them.			*
If asked, I would recommend the programs at ISU which are at least partially taught on T.V. (IHETS).			*
I believe that on the whole the students taking T.V. (IHETS) classes are satisfied.			*
The instructional relationships between the staff of the T.V. (IHETS) courses and students are good.			*
I feel that students taking T.V. (IHETS) courses are treated equal to students in traditional classes.			*

Table 5 Cont.

Items	Significance		NS
	p≤.01	p≤.05	
In getting instructional materials I feel that T.V. (IHETS) <sup>1</sup> students needs are given equal consideration to any other students.			*
I feel that the T.V. (IHETS) courses should be continued.			*
Generally speaking, I think the T.V. (IHETS) courses are a good alternative delivery system when compared to traditional field bases classes.			*
The outcome of my educational goal(s) depend upon T.V. (IHETS) taught courses.			*
T.V. (IHETS delivery of classes is one of the most promising instructional technologies in education today.			*
The advantages of T.V. (IHETS) courses far outweigh the disadvantages.			*
I am more efficient in my school work when I take T.V. (IHETS) classes.			*
Methods used in T.V. (IHETS) courses are as effective as those used in other courses.			*
A T.V. (IHETS) course has its drawbacks, but I like it.		EA	AR ITE HS
My likes and dislikes for courses delivered by T.V. balance one one another.			*
Generally the T.V. (IHETS) delivery of instruction worked well.			*
People were encouraged to participate in the discussions.			*
The pace of the sessions seemed to fit well within the time allocated.			*
The T.V. (IHETS) delivery did/does save time and money			*
The instructor(s) did a good job as a facilitator as well as an instructor.			*
I feel as comfortable in the T.V. (IHETS) classes as I do in traditional classes.			*

<sup>1</sup> AR = All Respondents, Total N = 152, Valid Cases N = 149, (3 missing cases), DF = 4.

<sup>2</sup> ITE = Industrial Technology Education Respondents, Total N = 62, Valid cases N = 62 (0 missing cases), DF = 4.

<sup>3</sup> HS = Health and Safety Respondents, Total N = 61, (1 missing case), DF = 4.

<sup>4</sup> EA = Education Administration Respondents, Total N = 29, Valid cases N = 29 (0 missing cases), DF = 4.

example, if females in a group perceived an item significantly different from males in that group the abbreviation for that group was reported in the significant column and the observation for all groups not reporting a significance were reported in the NS column. This format was followed for reporting the results of all Chi-Square analyses.

Table 6 presents the "Results of Chi-Square Analysis Comparing Respondents Who Had Taken One IHETS Course with Respondents Who Had Taken Two or More IHETS Courses." Table 7 presents the "Results of Chi-Square Analysis Comparing Respondents Who Traveled Less Than 10 Miles to Get to an IHETS Downsite (location) with Respondents Who Traveled More Than 10 Miles to Get to an IHETS Downsite." Table 8 presents the "Results of Chi-Square Analysis Comparing Respondents Who Traveled Less Than 10 Miles to Get to a Traditional Class with Respondents Who Traveled More Than 10 Miles to Get to a Traditional Class." Table 9 presents the "Results of Chi-Square Analysis comparing Respondents Who Work in a Post-Secondary Education Institution with Respondents Who Work in Secondary Education, Department of Corrections, and Business/Industry/Government Institutions." Table 10 presents the "Results of Chi-Square Analysis Comparing Respondents Who Work in Secondary Education Institutions with Respondents Who work in Post-Secondary Education, Department of Corrections, and Business/Industry/Government Institutions." Table 11 presents the "Results of Chi-Square Analysis Comparing Respondents who work in business/industry/government institutions with Respondents Who Work in Post-Secondary and Secondary Education and Department of Corrections."

Table 12 presents "One-Way Analysis of Variance (ANOVA) Comparing Respondent's Perception of Selected Items Between Groups." The table presents a statement, the groups

Table 6

Results of Chi-Square Analysis Comparing Respondents Who Has Taken One IHETS Course with Respondents Who Had Taken Two or More IHETS Courses

Items	Significance		NS
	p≤.01	p≤.05	
Biographical sketches and pictures would help me get to know people at other sites.			*
If I were now considering a graduate or undergraduate program, I would consider a program which delivers many of the courses by T.V. a good choice. (IHETS)	AR <sup>1</sup>	ITE <sup>2</sup> HS <sup>3</sup>	EA <sup>4</sup>
There are few courses which I would consider to be more successful than the T.V. (IHETS) course(s) I took.	AR ITE		AR EA
If I were telling a stranger about college programs, I would mention that Indiana State University offers programs in which many of the courses are delivered by T.V. (IHETS) as a selling point.	AR		ITE HS EA
I feel that the T.V. (IHETS) course(s) provide learning experiences equal to traditional courses.		AR ITE	HS EA
Compared to the evaluation techniques used in traditional classes, the evaluation and feedback techniques used in the T.V. (IHETS) courses are equal.			*
I think the interactions between students and instructors in T.V. (IHETS) classes are equal to the interaction in traditional classes.		AR	ITE HS EA
Compared to traditional classes, I believe that the interactions between students and students are equal.			*
I feel that Indiana State University has made a commitment to deliver quality programs to all who want them, need them, and can profit from them.			*
If asked, I would recommend the programs at ISU which are at least partially taught on T.V. (IHETS).	AR ITE		HS EA
I believe that on the whole the students taking T.V. (IHETS) classes are satisfied.	AR	ITE HS	EA
The instructional relationships between the staff of the T.V. (IHETS) courses and students are good.	AR	ITE	HS EA
I feel that students taking T.V. (IHETS) courses are treated equal to students in traditional classes.		AR HS	ITE EA

Table 6 Cont.

Items	Significance		NS
	$p \leq .01$	$p \leq .05$	
In getting instructional materials I feel that T.V. (IHETS) students needs are given equal consideration to any other students.			*
I feel that the T.V. (IHETS) courses should be continued.		AR HS	ITE EA
Generally speaking, I think the T.V. (IHETS) courses are a good alternative delivery system when compared to traditional field bases classes.	AR	HS	ITE EA
The outcome of my educational goal(s) depend upon T.V. (IHETS) taught courses.	AR ITE	HS	EA
T.V. (IHETS) delivery of classes is one of the most promising instructional technologies in education today.	AR ITE	HS	EA
The advantages of T.V. (IHETS) courses far outweigh the disadvantages.		AR	ITE HS EA
I am more efficient in my school work when I take T.V. (IHETS) classes.	ITE HS	AR	EA
Methods used in T.V. (IHETS) courses are as effective as those used in other courses.		AR	ITE HS EA
A T.V. (IHETS) course has its drawbacks, but I like it.			*
My likes and dislikes for courses delivered by T.V. balance one one another.			*
Generally the T.V. (IHETS) delivery of instruction worked well.	AR	ITE	HS EA
People were encouraged to participate in the discussions.	AR		ITE HS EA
The pace of the sessions seemed to fit well within the time allocated.			*
The T.V. (IHETS) delivery did/does save time and money	AR	ITE	HS EA
The instructor(s) did a good job as a facilitator as well as an instructor.			*
I feel as comfortable in the T.V. (IHETS) classes as I do in traditional classes.	AR ITE		HS EA

<sup>1</sup> AR = All Respondents, Total N = 152, Valid Cases N = 146, (6 missing cases), DF = 4.

<sup>2</sup> ITE = Industrial Technology Education Respondents, Total N = 62, Valid cases N = 60 (2 missing cases), DF = 4.

<sup>3</sup> HS = Health and Safety Respondents, Total N = 60, (1 missing case), DF = 4.

<sup>4</sup> EA = Education Administration Respondents, Total N = 29, Valid cases N = 26, (2 missing cases), DF = 4.

Table 7

Results of Chi-Square Analysis Comparing Respondents Who Had Traveled Less Than 10 Miles to Get to a Traditional Class with Respondents Who Had Traveled More than 10 Miles to Get to a Traditional Class.

Items	Significance		NS
	p≤.01	p≤.05	
Biographical sketches and pictures would help me get to know people at other sites.		AR <sup>1</sup>	ITE <sup>2</sup> HS <sup>3</sup> EA <sup>4</sup>
If I were now considering a graduate or undergraduate program, I would consider a program which delivers many of the courses by T.V. a good choice. (IHETS)			*
There are few courses which I would consider to be more successful than the T.V. (IHETS) course(s) I took.	EA	ITE	AR HS
If I were telling a stranger about college programs, I would mention that Indiana State University offers programs in which many of the courses are delivered by T.V. (IHETS) as a selling point.	AR ITE		HS EA
I feel that the T.V. (IHETS) course(s) provide learning experiences equal to traditional courses.		AR ITE EA	HS
Compared to the evaluation techniques used in traditional classes, the evaluation and feedback techniques used in the T.V. (IHETS) courses are equal.		AR	ITE HS EA
I think the interactions between students and instructors in T.V. (IHETS) classes are equal to the interaction in traditional classes.			*
Compared to traditional classes, I believe that the interactions between students and students are equal.			*
I feel that Indiana State University has made a commitment to deliver quality programs to all who want them, need them, and can profit from them.			*
If asked, I would recommend the programs at ISU which are at least partially taught on T.V. (IHETS).	ITE		HS EA AR
I believe that on the whole the students taking T.V. (IHETS) classes are satisfied.			*
The instructional relationships between the staff of the T.V. (IHETS) courses and students are good.			*
I feel that students taking T.V. (IHETS) courses are treated equal to students in traditional classes.			*

Table 7 Cont.

Items	Significance		NS
	p≤.01	p≤.05	
In getting instructional materials I feel that T.V. (IHETS) students needs are given equal consideration to any other students.			*
I feel that the T.V. (IHETS) courses should be continued.			*
Generally speaking, I think the T.V. (IHETS) courses are a good alternative delivery system when compared to traditional field bases classes.		ITE	AR HS EA
The outcome of my educational goal(s) depend upon T.V. (IHETS) taught courses.		ITE	AR HS EA
T.V. (IHETS) delivery of classes is one of the most promising instructional technologies in education today.			*
The advantages of T.V. (IHETS) courses far outweigh the disadvantages.		ITE	AR HS EA
I am more efficient in my school work when I take T.V. (IHETS) classes.			*
Methods used in T.V. (IHETS) courses are as effective as those used in other courses.			*
A T.V. (IHETS) course has its drawbacks, but I like it.			*
My likes and dislikes for courses delivered by T.V. balance one one another.			*
Generally the T.V. (IHETS) delivery of instruction worked well.		ITE	AR HS EA
People were encouraged to participate in the discussions.			*
The pace of the sessions seemed to fit well within the time allocated.			*
The T.V. (IHETS) delivery did/does save time and money	ITE		AR HS EA
The instructor(s) did a good job as a facilitator as well as an instructor.			*
I feel as comfortable in the T.V. (IHETS) classes as I do in traditional classes.		HS	AR ITE EA

<sup>1</sup> AR = All Respondents, Total N = 152, Valid Cases N = 151, (1 missing case), DF = 4.

<sup>2</sup> ITE = Industrial Technology Education Respondents, Total N = 62, Valid cases N = 61 (0 missing cases), DF = 4.

<sup>3</sup> HS = Health and Safety Respondents, Total N = 61, (1 missing case), DF = 4.

<sup>4</sup> EA = Education Administration Respondents, Total N = 29, Valid cases N = 29 (0 missing cases), DF = 4.

Table 8

Results of Chi-Square Analysis Comparing Respondents Who Had Traveled Less Than 10 Miles to Get to a Traditional Class with Respondents Who Had Traveled More than 10 Miles to Get to a Traditional Class.

Items	Significance		NS
	p≤.01	p≤.05	
Biographical sketches and pictures would help me get to know people at other sites.			*
If I were now considering a graduate or undergraduate program, I would consider a program which delivers many of the courses by T.V. a good choice. (IHETS)		AR <sup>1</sup>	ITE <sup>2</sup> HS <sup>3</sup> EA <sup>4</sup>
There are few courses which I would consider to be more successful than the T.V. (IHETS) course(s) I took.			*
If I were telling a stranger about college programs, I would mention that Indiana State University offers programs in which many of the courses are delivered by T.V. (IHETS) as a selling point.	ITE		AR HS EA
I feel that the T.V. (IHETS) course(s) provide learning experiences equal to traditional courses.			*
Compared to the evaluation techniques used in traditional classes, the evaluation and feedback techniques used in the T.V. (IHETS) courses are equal.		ITE	AR HS EA
I think the interactions between students and instructors in T.V. (IHETS) classes are equal to the interaction in traditional classes.			*
Compared to traditional classes, I believe that the interactions between students and students are equal.			*
I feel that Indiana State University has made a commitment to deliver quality programs to all who want them, need them, and can profit from them.		AR ITE	HS EA
If asked, I would recommend the programs at ISU which are at least partially taught on T.V. (IHETS).		ITE	AR HS EA
I believe that on the whole the students taking T.V. (IHETS) classes are satisfied.	AR ITE		HS EA
The instructional relationships between the staff of the T.V. (IHETS) courses and students are good.	ITE	AR HS	EA
I feel that students taking T.V. (IHETS) courses are treated equal to students in traditional classes.		ITE	AR HS EA

Table 8 Cont.

Items	Significance		NS
	p≤.01	p≤.05	
In getting instructional materials I feel that T.V. (IHETS) students needs are given equal consideration to any other students.		ITE	AR HS EA
I feel that the T.V. (IHETS) courses should be continued.	ITE	AR	HS EA
Generally speaking, I think the T.V. (IHETS) courses are a good alternative delivery system when compared to traditional field bases classes.			*
The outcome of my educational goal(s) depend upon T.V. (IHETS) taught courses.	EA	AR	ITE HS
T.V. (IHETS delivery of classes is one of the most promising instructional technologies in education today.		ITE	AR HS EA
The advantages of T.V. (IHETS) courses far outweigh the disadvantages.			*
I am more efficient in my school work when I take T.V. (IHETS) classes.			*
Methods used in T.V. (IHETS) courses are as effective as those used in other courses.			*
A T.V. (IHETS) course has its drawbacks, but I like it.			*
My likes and dislikes for courses delivered by T.V. balance one another.			*
Generally the T.V. (IHETS) delivery of instruction worked well.	ITE		AR HS EA
People were encouraged to participate in the discussions.		EA	AR ITE HS
The pace of the sessions seemed to fit well within the time allocated.	AR		ITE HS EA
The T.V. (IHETS) delivery did/does save time and money	AR HS	EA	ITE
The instructor(s) did a good job as a facilitator as well as an instructor.	AR	ITE	HS EA
I feel as comfortable in the T.V. (IHETS) classes as I do in traditional classes.	HS	AR	ITE EA

<sup>1</sup> AR = All Respondents, Total N = 152, Valid Cases N = 151, (1 missing case), DF = 4.

<sup>2</sup> ITE = Industrial Technology Education Respondents, Total N = 62, Valid cases N = 62 (0 missing cases), DF = 4.

<sup>3</sup> HS = Health and Safety Respondents, Total N = 61, valid N = 62, (0 missing cases), DF = 4.

<sup>4</sup> EA = Education Administration Respondents, Total N = 29, Valid cases N = 29 (0 missing cases), DF = 4

Table 9

Results of Chi-Square Analysis Comparing Respondents Who Work in Post-Secondary Education Institutions With Respondents Who Work in Secondary Education and Business/Industry/Government Institutions.

Items	Significance		NS
	p≤.01	p≤.05	
Biographical sketches and pictures would help me get to know people at other sites.			AR <sup>1</sup> ITE <sup>2</sup> See Notes
If I were now considering a graduate or undergraduate program, I would consider a program which delivers many of the courses by T.V. a good choice. (IHETS)	AR		ITE
There are few courses which I would consider to be more successful than the T.V. (IHETS) course(s) I took.		ITE	AR
If I were telling a stranger about college programs, I would mention that Indiana State University offers programs in which many of the courses are delivered by T.V. (IHETS) as a selling point.		AR	ITE
I feel that the T.V. (IHETS) course(s) provide learning experiences equal to traditional courses.			AR ITE
Compared to the evaluation techniques used in traditional classes, the evaluation and feedback techniques used in the T.V. (IHETS) courses are equal.			AR ITE
I think the interactions between students and instructors in T.V. (IHETS) classes are equal to the interaction in traditional classes.			AR ITE
Compared to traditional classes, I believe that the interactions between students and students are equal.			AR ITE
I feel that Indiana State University has made a commitment to deliver quality programs to all who want them, need them, and can profit from them.			AR ITE
If asked, I would recommend the programs at ISU which are at least partially taught on T.V. (IHETS).			AR ITE
I believe that on the whole the students taking T.V. (IHETS) classes are satisfied.		AR	ITE
The instructional relationships between the staff of the T.V. (IHETS) courses and students are good.		AR ITE	
I feel that students taking T.V. (IHETS) courses are treated equal to students in traditional classes.			AR ITE

Table 9 Cont.

Items	Significance		NS
	$p \leq .01$	$p \leq .05$	
In getting instructional materials I feel that T.V. (IHETS) students needs are given equal consideration to any other students.			AR ITE
I feel that the T.V. (IHETS) courses should be continued.			AR ITE
Generally speaking, I think the T.V. (IHETS) courses are a good alternative delivery system when compared to traditional field bases classes.		AR	ITE
The outcome of my educational goal(s) depend upon T.V. (IHETS) taught courses.		AR ITE	
T.V. (IHETS) delivery of classes is one of the most promising instructional technologies in education today.		AR	ITE
The advantages of T.V. (IHETS) courses far outweigh the disadvantages.		AR	ITE
I am more efficient in my school work when I take T.V. (IHETS) classes.			AR ITE
Methods used in T.V. (IHETS) courses are as effective as those used in other courses.			AR ITE
A T.V. (IHETS) course has its drawbacks, but I like it.			AR ITE
My likes and dislikes for courses delivered by T.V. balance one. one another.			AR ITE
Generally the T.V. (IHETS) delivery of instruction worked well.			AR ITE
People were encouraged to participate in the discussions.			AR ITE HS
The pace of the sessions seemed to fit well within the time allocated.			AR ITE
The T.V. (IHETS) delivery did/does save time and money		ITE	AR
The instructor(s) did a good job as a facilitator as well as an instructor.			AR ITE
I feel as comfortable in the T.V. (IHETS) classes as I do in traditional classes.			AR ITE

<sup>1</sup> AR = All Respondents, Total N = 152, Valid Cases N = 150, (2 missing cases), DF = 4.

<sup>2</sup> ITE = Industrial Technology Education Respondents, Total N = 62, Valid cases N = 62 (0 missing cases), DF = 4.

Note No. 1: Health and Safety N for Post-Secondary was too low to make a valid comparison.

Note No. 2: Education Administration N for Post-Secondary was too low to make a valid comparison.

Table 10

Results of Chi-Square Analysis Comparing Respondents Who Work in Secondary Education Institutions with Respondents Who Work in Post-Secondary Education, Department of Corrections, and Business/Industry/Government Institutions

Items	Significance		NS
	p≤.01	p≤.05	
Biographical sketches and pictures would help me get to know people at other sites.		ITE <sup>2</sup>	AR <sup>1</sup> HS <sup>3</sup> EA <sup>4</sup>
If I were now considering a graduate or undergraduate program, I would consider a program which delivers many of the courses by T.V. a good choice. (IHETS)	AR ITE		HS EA
There are few courses which I would consider to be more successful than the T.V. (IHETS) course(s) I took.	ITE		AR HS EA
If I were telling a stranger about college programs, I would mention that Indiana State University offers programs in which many of the courses are delivered by T.V. (IHETS) as a selling point.			*
I feel that the T.V. (IHETS) course(s) provide learning experiences equal to traditional courses.			*
Compared to the evaluation techniques used in traditional classes, the evaluation and feedback techniques used in the T.V. (IHETS) courses are equal.			*
I think the interactions between students and instructors in T.V. (IHETS) classes are equal to the interaction in traditional classes.			*
Compared to traditional classes, I believe that the interactions between students and students are equal.			*
I feel that Indiana State University has made a commitment to deliver quality programs to all who want them, need them, and can profit from them.			*
If asked, I would recommend the programs at ISU which are at least partially taught on T.V. (IHETS).			*
I believe that on the whole the students taking T.V. (IHETS) classes are satisfied.			*
The instructional relationships between the staff of the T.V. (IHETS) courses and students are good.			*
I feel that students taking T.V. (IHETS) courses are treated equal to students in traditional classes.			*

Table 10 Cont.

Items	Significance		NS
	p<.01	p<.05	
In getting instructional materials I feel that T.V. (IHETS) students needs are given equal consideration to any other students.			*
I feel that the T.V. (IHETS) courses should be continued.			*
Generally speaking, I think the T.V. (IHETS) courses are a good alternative delivery system when compared to traditional field bases classes.		AR	ITE HS EA
The outcome of my educational goal(s) depend upon T.V. (IHETS) taught courses.	AR	HS	ITE EA
T.V. (IHETS delivery of classes is one of the most promising instructional technologies in education today.	AR ITE		HS EA
The advantages of T.V. (IHETS) courses far outweigh the disadvantages.			*
I am more efficient in my school work when I take T.V. (IHETS) classes.			*
Methods used in T.V. (IHETS) courses are as effective as those used in other courses.			*
A T.V. (IHETS) course has its drawbacks, but I like it.			*
My likes and dislikes for courses delivered by T.V. balance one one another.			*
Generally the T.V. (IHETS) delivery of instruction worked well.			*
People were encouraged to participate in the discussions.			*
The pace of the sessions seemed to fit well within the time allocated.			*
The T.V. (IHETS) delivery did/does save time and money			*
The instructor(s) did a good job as a facilitator as well as an instructor.			*
I feel as comfortable in the T.V. (IHETS) classes as I do in traditional classes.	AR		ITE HS

<sup>1</sup> AR = All Respondents, Total N = 152, Valid Cases N = 152, (0 missing cases), DF = 4.

<sup>2</sup> ITE = Industrial Technology Education Respondents, Total N = 62, Valid cases N = 62 (0 missing cases), DF = 4.

<sup>3</sup> HS = Health and Safety Respondents, Total N = 61, valid cases N = 61 (0 missing cases), DF = 4.

<sup>4</sup> EA = Education Administration Respondents, Total N = 29, Valid cases N = 29 (0 missing cases), DF = 4.

Table 11

Results of Chi-Square Analysis Comparing Respondents Who Work in Business/Industry/Government Institutions with Respondents Who Work in Post-Secondary Education, Secondary Education and Department of Corrections.

Items	Significance		NS
	p≤.01	p≤.05	
Biographical sketches and pictures would help me get to know people at other sites.			AR <sup>1</sup> ITE <sup>2</sup> HS <sup>3</sup> See Notes
If I were now considering a graduate or undergraduate program, I would consider a program which delivers many of the courses by T.V. a good choice. (IHETS)			*
There are few courses which I would consider to be more successful than the T.V. (IHETS) course(s) I took.			*
If I were telling a stranger about college programs, I would mention that Indiana State University offers programs in which many of the courses are delivered by T.V. (IHETS) as a selling point.			*
I feel that the T.V. (IHETS) course(s) provide learning experiences equal to traditional courses.			*
Compared to the evaluation techniques used in traditional classes, the evaluation and feedback techniques used in the T.V. (IHETS) courses are equal.			*
I think the interactions between students and instructors in T.V. (IHETS) classes are equal to the interaction in traditional classes.			*
Compared to traditional classes, I believe that the interactions between students and students are equal.		HS	AR ITE
I feel that Indiana State University has made a commitment to deliver quality programs to all who want them, need them, and can profit from them.			*
If asked, I would recommend the programs at ISU which are at least partially taught on T.V. (IHETS).			*
I believe that on the whole the students taking T.V. (IHETS) classes are satisfied.			*
The instructional relationships between the staff of the T.V. (IHETS) courses and students are good.			*
I feel that students taking T.V. (IHETS) courses are treated equal to students in traditional classes.			*

Table 11 Cont.

Items	Significance		NS
	p≤.01	p≤.05	
In getting instructional materials I feel that T.V. (IHETS) students needs are given equal consideration to any other students.			*
I feel that the T.V. (IHETS) courses should be continued.			*
Generally speaking, I think the T.V. (IHETS) courses are a good alternative delivery system when compared to traditional field bases classes.			*
The outcome of my educational goal(s) depend upon T.V. (IHETS) taught courses.		AR	ITE HS
T.V. (IHETS) delivery of classes is one of the most promising instructional technologies in education today.			*
The advantages of T.V. (IHETS) courses far outweigh the disadvantages.			*
I am more efficient in my school work when I take T.V. (IHETS) classes.			*
Methods used in T.V. (IHETS) courses are as effective as those used in other courses.			*
A T.V. (IHETS) course has its drawbacks, but I like it.			*
My likes and dislikes for courses delivered by T.V. balance one one another.			*
Generally the T.V. (IHETS) delivery of instruction worked well.			*
People were encouraged to participate in the discussions.			*
The pace of the sessions seemed to fit well within the time allocated.			*
The T.V. (IHETS) delivery did/does save time and money			*
The instructor(s) did a good job as a facilitator as well as an instructor.			*
I feel as comfortable in the T.V. (IHETS) classes as I do in traditional classes.			*

<sup>1</sup> AR = All Respondents, Total N = 152, Valid Cases N = 152, (0 missing cases), DF = 4.

<sup>2</sup> ITE = Industrial Technology Education Respondents, Total N = 62, Valid cases N = 62 (0 missing cases), DF = 4.

<sup>3</sup> HS = Health and Safety Respondents, Total N = 61, valid cases = 61, (0 missing cases), DF = 4.

Note No. 1: Education Administration N for Business/Industry/Government was too low to make a valid comparison.

Table 12

## One-Way ANOV Comparing Perception of Selected Items Between Groups

Statement	Group	$p \leq .05$
Enrollment in IHETS courses will increase in the future.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS
I would use the IHETS Delivery system to sell the ITE program.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS
I feel that IHETS courses provide learning expediencies equal to other courses.	ITE vs. EA HS vs. EA ITE vs. HS	NS • NS
Interaction(s) between/among student(s) and student(s) in IHETS courses is/are equal to interaction(s) in other courses.	ITE vs. EA HS vs. EA ITE vs. HS	NS • NS
On the whole students taking IHETS classes are satisfied.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS
I feel that IHETS classes should be continued.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS
Generally speaking I believe that IHETS courses are a good alternative to "traditional field based" courses.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS
The outcome of my educational goal(s) depends on IHETS courses.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS
IHETS delivery of classes is one of the most promising instructional technologies in education today.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS
The advantages of IHETS courses far outweigh the disadvantages.	ITE vs. EA HS vs. EA ITE vs. HS	• NS NS
IHETS courses force me to be efficient in my school work.	ITE vs. EA HS vs. EA ITE vs. HS	• • NS

Table 12 Cont.

Statement	Group	$p \leq .05$
Methods used in IHETS courses are as efficient as those used in others.	ITE vs. EA HS vs. EA ITE vs. HS	NS * NS
My likes and dislikes for IHETS courses balance one another.	ITE vs. EA HS vs. EA ITE vs. HS	NS * NS
I felt as comfortable in IHETS classes as I do in traditional classes.	ITE vs. EA HS vs. EA ITE vs. HS	NS * *

Notes: \* = Significant at  $p \leq .05$ ; NS = Not significant at  $p \leq .05$ .

Group 1: Industrial Technology Education (ITE, N = 62).

Group 2: Health and Safety (HS, N = 61).

Group 3: Education Administration (EA, N = 29).

being compared, and a significance column. An asterisk (\*) in the significance column means the comparison between the groups being compared was significant at the ( $p < .05$ ) level of significance for that statements; an NS in the significance column means the comparison was not significant at ( $p < .05$ ).

Table 13 presents "Frequency Data on Subjects Self Rating of Support or Nonsupport of the IHETS Delivery System. Subjects were asked to rate themselves on a rating scale. The scale was five inches long. The scale was labeled at one end "Not Supportive (I feel strongly unfavorable toward IHETS classes)" at the other end "Supportive (I feel strongly favorable toward IHETS classes)." Responders were asked to place an "X" on the line at a position between Not Supportive and Supportive of IHETS classes, "where you feel you are at this time." This was the last item on the questionnaire. A five inch scale was used to score the "Self Rating Scale." If the "X" was in the two inch segment of the scale toward supportive, the response was labeled supportive. If the "X" was in the two inch segment near non-supportive, the response was labeled non-supportive. If the "X" was in the one inch segment in the center, the response was labeled undecided or neutral (Table 13, p. 45).

Table 13

Frequency Data on Subjects Self Rating of Support or Non Support for the IHETS Delivery System

Group	Support	Nonsupport	Neutral	N	Missing Cases
Education Administration	22(76.0%)	4(13.7%)	3(10.3%)	29	0
Industrial Technology Education	52(83.9%)	3(4.8%)	7(11.3%)	62	0
Health and Safety	56(91.8%)	0	5(8.2%)	61	0
<b>Total</b>	<b>130(85.5%)</b>	<b>7(4.6%)</b>	<b>15(9.9%)</b>	<b>152</b>	<b>0</b>

### Discussion

It was the purpose of this research to determine the attitudes of students, who have taken Indiana Higher Education Telecommunication System (IHETS) courses, toward that delivery system. The purpose was accomplished through a search for answers to a group of proposed questions. A discussion of the results of the study as it relates to each question follows.

Did Students, Who Have Taken IHETS (T.V.) Courses, Perceive the IHETS Delivered Classes to be a Viable Alternative to Traveling to Distant, Off-Campus Classes with an On-Site Instructor?

All respondent's perception. (N=152; Table 2a, p. 11). The responses indicate that IHETS students (N=141, 92.7%) believe that the IHETS delivery system is a viable alternative to "traditional field based classes". Five responders (3.3%) disagreed with the statement. Seventy-one percent (N=108) reported that their educational goals depends on the IHETS delivery system.

Many students (N=127, 83.5%) believe that the advantages of taking IHETS classes far outweigh the disadvantages. They also believe that the delivery system works well for them (N=133, 87.5%), and that IHETS delivery system should be used to sell their major (N=132, 86.9%). One hundred and thirty-three subjects (87.5%) stated that they would recommend programs at ISU which are at least partially taught on T.V. Subjects (133, 87.5%) reported that the IHETS classes did save them time and money. Should the IHETS classes be continued? Yes! was the response from 92.1% (N=140) of the responders.

Education Administration (EA) students' perception. (N=29; Table 2b, p. 13). Generally speaking the Education Administration group perceived the IHETS delivery

system positively. However, their perceptions were less positive than was either the Industrial Technology Education (ITE) group. (Table 2c, p. 15) or the Health and Safety (HS) group (Table 2d, p. 17). The Education Administration group reported that the IHETS delivery system works well for them ( $N=24$ , 82.7%), and the delivery by T.V. does save them time and money ( $N=26$ , 89.7%). One should be aware that the N (29) for Education Administration was less than one-half of the N (62) for Industrial Technology Education and N (61) for Health and Safety.

Industrial Technology Education student's perception. ( $N=62$ ; Table 2c, p. 15). The Industrial Technology Education group had a positive perception of the IHETS delivery system as a viable alternative to traditional field-based classes. This group reported that they would use the IHETS delivery system to sell their major ( $N=55$ , 88.7%) and if asked, they would recommend programs at Indiana State University which are partially taught on T.V. ( $N=55$ , 88.7%). They believe that IHETS courses are a good alternative to traditional field based classes ( $N=58$ , 93.6%). Fifty responders (80.7%) reported that the outcomes of their educational goals depends on the IHETS delivery system. Generally speaking this group reported that the delivery system works well ( $N=55$ , 88.7%); T.V. taught courses saved them time and money ( $N=55$ , 88.7%), and that they believe that the IHETS classes should be continued ( $N=58$ , 93.6%).

Health and Safety student's perception. ( $N=61$ ; Table 2d, p. 17). The Health and Safety group was very positive toward the IHETS delivery system. If asked they would recommend the programs at Indiana State University which are at least partially taught on T.V. ( $N=56$ , 91.8%); also, they would use the IHETS delivery system to sell the Health and Safety programs ( $N=56$ , 91.8%). They reported that they perceived the IHETS courses as

being a good alternative to traditional field based classes (N=60, 98.4%). This group reported that the advantages of the IHETS courses far outweigh the disadvantages (N=55, 90.1%); generally the IHETS delivery system worked well (N=54, 88.5%), and that the IHETS delivery did save them time and money (N=52, 85.3%). This group reported 100% (N=61) that the IHETS classes should be continued.

### Conclusion

While there appears to be some room for improvement in the IHETS delivery system, this research indicates that students who have been involved feel very positive toward the system. They reported overwhelmingly that the IHETS delivery of programs should be continued (AR @ 92.1%; EA @ 72.4%; ITE @ 93.6%; HS @ 100.0%).

### Did Participants Compare Their Experience in IHETS (T.V.) Delivered Classes Favorably With Other Delivery Systems?

All respondent's perception. (N=152; Table 3a, p. 18).

When asked if IHETS courses provide learning experiences equal to other courses N=106 (69.7%) agreed that they did; N=30 (19%) believe that they did not and N=16 (10.5%) were undecided. Over all respondents (N=102, 67.1%) believed that the evaluation techniques used in IHETS courses are equal to other courses, while N=31 (20.4%) disagreed and N=19 (12.5%) were undecided.

Interaction between students and instructors and between or among students need to be improved. While many reported that they were undecided about interactions, negative feelings were expressed concerning interactions between students and instructors (N=58, 38.2%); and, between or among students (N=81, 53.3%).

Responders were more positive toward the methods and comfort level in the learning environment. They reported that they felt that methods used in IHETS classes are as effective as those used in other classes (agree, N=109, 71.7%; disagree, N=16, 10.5%; disagree N=25, 16.4%). Students also reported that they felt comfortable in the IHETS classes (N=128, 84.2%).

Students believe that interactions in IHETS courses are a concern. However, they do not appear to be negatively affected by the concern. They report that instructors encourage them to participate in class discussion (Table 4a, p. 22; N=135, 88.8%), and they feel comfortable in the class environment.

Education Administration student's perception. (N=29; Table 3b, p. 19).

This group of students reported a positive perception of the learning experiences (agree N=16, 55.1%; disagree, N=9, 31.0%; undecided, N=4, 13.8%); evaluation and feedback techniques (agree N=15, 51.7%); (disagree, N=11, 37.9%); (undecided, N=3, 10.3%), and methods used in IHETS classes (agree, N=16, 55.1%; disagree, N=6, 20.6%; undecided, N=5, 17.2%). However, the number of negative and undecided responses should alert instructors and administrators that some improvement is needed. Nearly 80% (N=23) of the subjects reported that they are as comfortable in IHETS classes as they are in traditional classes.

Industrial Technology Education student's perception. (N=62; Table 3c, p. 20).

Some concern should be expressed regarding interactions between students and instructors (agree, N=32, 51.6%); disagree, N=21, 33.9%) and between and among students (agree N=17, 27.4%; disagree, N=37, 59.7%). There appears to be a positive response to the equality of IHETS learning experiences when compared to traditional classes (N=42,

67.7%); evaluation and feedback techniques (N=45, 72.6%), and methods used in IHETS classes (N=42, 67.7%). However, the number of negative and undecided responses should alert instructors and administration to the need for improvement in these areas. This group did report that they feel comfortable in IHETS classes (N=48, 77.4%).

Health and Safety student's perception. (N=62; Table 3d, p. 21).

This group reported a more positive attitude toward IHETS classes, when compared to traditional classes, than did the EA and ITE groups. However, with this group there is also some need for concern. They seemed to feel very comfortable in the IHETS environment (N=57, 93.5%). Also, they perceived the methods (N=51, 83.6%) and learning experiences (N=58, 78.7%) used in IHETS to be as effective as those methods used in other classes. When asked if the evaluation and feedback techniques were equal to other courses (N=42, 68.9%), they believe that they were; while 64.4% (N=35) of the responders believed that interaction between students and instructors were equivalent to other courses, only 45.9% (N=28) of them thought that interaction between or among students were equivalent to other classes.

Conclusions

Generally students were positive in their comparison of IHETS delivered classes to other classes. However, the number of responders who did not hold this positive view leave some concerns. It is recommended that instructors and administrators should work on (1) the interaction between students and instructors, and between and among students, (2) methods, and (3) evaluation and feedback techniques. Students seem to have a high level of comfort in the IHETS environment. Also, students report that instructors did encourage them to participate in class discussions (Table 4c, p. 24, N=52, 85.2%).

Did Participants Have a Positive Perception of Their Relationship With The Instructor/Institution?

All respondent's perception. (N=152; Table 4a, p. 22).

Responders perceive their relationship with their IHETS instructors and Indiana State University (ISU) in a positive way. They believe that ISU has made a commitment to deliver quality programs (N=135, 88.8%); and they reported that students taking IHETS classes are treated equal to students taking traditional classes (N=127, 83.5%); they also believe that their needs for receiving instructional materials are given equal consideration (N=119, 78.3%). Subjects reported that their instructors did a good job as a facilitator as well as an instructor (N=130, 85.5%) and the pace of instruction fit well within the time allocated (N=137, 90.1%). Overall subjects' perceived (88.8%; N=135) that their instructor encouraged them to participate in class discussion. Students report good instructional relationships exist between IHETS instructors and students (N=128, 84.2%).

Education Administration student's perception. (N=29; Table 4b, p. 23).

This group had positive perception of the instructor/institutional relationships with IHETS students. They believe that IHETS instructors did a good job as a facilitator as well as an instructor (N=25, 86.2%); their instructors encouraged them to participate in class discussions (N=27, 93.1%), and the pace of the instructions fit well within the time allocated (N=25, 86.2%). The students reported that IHETS students are treated equal to traditional students (N=23, 79.3%), and that their needs are given equal consideration to other students in receiving instructional materials (N=21, 72.4%). They believe that ISU has made a commitment to delivery quality programs over the IHETS (N=26, 89.6%).

Industrial Technology Education student's perception. (N=62; Table 4c, p. 24).

Industrial Technology Education students perceive the instructor/institutional relationship with IHETS students as being very positive. They believe that participants in IHETS classes were encouraged to participate in class discussions (N=56, 90.3%). Their instructors did a good job as a facilitator as well as an instructor (N=53, 85.5%), and the pace of the instructions fit well within the time allocated (N=56, 90.3%). They also reported that students taking IHETS classes are treated equal to students in traditional classes. They believe that their needs for instructional materials are given equal consideration to other students (N=51, 82.2%) and that ISU has made a commitment to deliver quality programs (N=55, 88.7%).

Health and Safety Education student's perception. (N=61; Table 4d, p. 25).

This group believes that instructor/institutional relations with IHETS students are good. They believe that their instructors encouraged them to participate in class discussions (N=52, 85.2%), and that their IHETS instructors did a good job as a facilitator as well as an instructor (N=52, 85.2%). They also reported that the pace of the instructions fit well within the time allocated (N=56, 91.8%). They believe that they were treated equal to students in traditional classes (N=51, 83.6%), and that their needs for receiving instructional materials were given equal consideration to other students (N=47, 77.1%). This group reported that they believe Indiana State University has made a commitment to deliver quality programs (N=54, 88.5%).

Conclusion

The research data supports a conclusion that IHETS participants have a positive perception of their relationship with IHETS instructors and Indiana State University.

Did Males Perceive Their Experience(s) in IHETS Classes Different Than Females? (Table 5, p. 26)

There were no significant differences ( $p < .05$ ) for all respondents (AR) over all items. When the groups were analyzed separately, over all items, Education Administration (EA) male students perceived two items significantly different ( $p < .05$ ) from female students; Health and Safety (HS) males perceived one item significantly different ( $p < .05$ ) from female students, and there were no significant differences ( $p < .05$ ) between Industrial Technology Education males and females.

Conclusion

Generally speaking male and female IHETS students do not perceive the IHETS delivery system significantly different ( $p < .05$ ).

Did the Number of IHETS Courses the Responder Has Taken One vs. Two or More, Affect Their Attitude Toward Taking IHETS Classes? (Table 6, p. 29)

All responders (AR) who had taken two or more courses were compared with all responders who had taken one course. The two groups were significantly different on items dealing with program satisfaction and selection e.g., recommending a program delivered on IHETS, instructor and institutional relationships, and whether or not the IHETS delivery system should be continued. The groups also presented significantly different points of view as to whether or not their educational goals depends upon the IHETS delivery system; if the delivery system worked well; did the pace of the instructions fit the allocated time, and whether or not the delivery system saved them time and money.

The Education Administration (EA) responders who had taken two or more courses did not perceive any items significantly different from those who had taken only one course

delivered on IHETS. However, the Industrial Technology Education (ITE) groups held significantly different opinions about several items. The ITE group held significantly different attitudes toward selecting or recommending a program partially delivered by IHETS; whether or not IHETS delivered courses are equal to traditional courses; if IHETS students are satisfied; if instructional relations are good, and whether or not the outcomes of their educational goals depends upon IHETS delivered courses and saves them time and money. Also, the two groups held significantly different opinions as to how comfortable they felt in IHETS classes.

The Health and Safety group varied significantly in their perception of many items. Students who had taken two or more courses delivered by IHETS held different opinions from students who had taken one IHETS delivered course concerning selecting a program which is partially delivered by IHETS. They also differed significantly in their opinions of student satisfaction with IHETS and treatment; whether or not IHETS delivered courses should be continued; IHETS as an alternative delivery system; whether or not IHETS delivered classes force them to be more efficient in their school work, and whether or not their educational outcomes depends on the IHETS delivery system.

### Conclusion

The data supports a conclusion that as Industrial Technology Education and Health and Safety students take more courses over IHETS they become more positive toward the delivery system. The Chi-Square analysis indicates that Education Administration respondents were not different enough to conclude that the two groups, two classes vs. one class, represent different population opinions.

Did the Distance Participants Had to Travel Get to an IHETS Downsite (location), 0 to 10 Miles vs. 10 or More Miles, Affect Their Opinion of the IHETS Delivery System? (Table 7, p. 32)

All respondents, who had to travel 0 to 10 miles to get to an IHETS downsite, were compared with all respondents, who had to travel 10 or more miles to get to an IHETS downsite. The data were subjected to a Chi-square analysis. The two groups held different opinions toward four items. They perceived differently the need for biographical sketches and pictures to help students get to know students located at other sites. Also, the two groups differed in their views concerning recommending the programs at ISU and whether or not the IHETS learning experiences and evaluation techniques are equal to traditional classes.

The responses received from Industrial Technology Education (ITE) students varied considerably more than did the other two groups. Responders who had to travel more than 10 miles to get to an IHETS downsite had a different opinion concerning the success of IHETS courses than did the responders who traveled 0-10 miles. Also, their opinions were significantly different when comparing IHETS learning experiences with traditional program partially taught on T.V. The two groups' perception was significantly different concerning IHETS as an alternative delivery system; whether or not their educational outcomes depends on IHETS delivered courses, and the advantages of IHETS. Opinions of the two groups varied significantly as to whether or not the IHETS Delivery System worked well; saved them time and money, and whether or not they felt comfortable in IHETS delivered classes. Health and Safety responses varied significantly on only one item and that was whether or not they felt comfortable in IHETS classes.

### Conclusion

While the data yielded some significant differences, the researcher feels that one must conclude that the distance students travel, 0-10 miles vs. 10 or more miles, is not a significant variable. Most of the difference between the groups was accounted for in the ITE group and within that group the number of significant items does not support a conclusion that distance traveled to an IHETS downsite is a significant variable.

### Did The Distance Participants Had to Travel to Get to a Traditional Class with an On-Site Instructors 0-10 Miles vs. 10 or More Miles, Affect Their Opinion of the IHETS Delivery System? (Table 8, p. 34)

Upon beginning the discussion, the researcher would direct your attention to Table 1, p. 7 and compare the distance responders travel to get to IHETS downsites vs. the distance they traveled to get to on-site classes. To get to an IHETS downsite 90 (59.2%) participation traveled less than 10 miles and 61 (40.1%) traveled more than 10 miles. To get to an on-site class 24 participants (14.9%) traveled less than 10 miles and 127 (83.6%) travel more than 10 miles.

All Respondents (AR) varied significantly in their opinions on several items. Those subjects who travel less than 10 miles were significantly different from those who travel more than 10 miles in how they responded to the statement concerning the selection of a program which delivers many courses by T.V. a good choice. Also, the groups differed significantly in their perception of whether or not ISU made a commitment to deliver quality programs; students satisfaction with the IHETS classes; relationships between the faculty and students, and whether or not the IHETS delivery system should be continued. The groups also vary in their opinion as to whether or not their educational goals depends on the IHETS delivery

system, and if IHETS saves them time and money. The groups also had different opinions about the pace of the sessions fitting the time allocated; the instructor as a facilitator, and how comfortable they feel in IHETS classes.

It is interesting to note that as the groups within the Education Administration, Industrial Technology Education, and even Health and Safety were restructured from "distance traveled to an IHETS downsite" to "distance traveled to an on-site class" the items on which there was significant difference changed also; compare Tables 7, p. 32 and 8, p. 34. Education Administration (EA) varied significantly on three items. Industrial Technology Education (ITE) varied significantly on twelve items. Health and Safety (HS) varied significantly on three items. However, there were only three items on which ITE students varied the same on both Table 7, p. 32 and Table 8, p. 34. Health and Safety varied the same on one item and EA did not vary the same on any item.

### Conclusion

The data on subjects response to travel to on-site classes tend to be more significant than their response to travel to IHETS downsites. However, this would support a statement that IHETS is a viable alternative to traditional "on-site classes." Distance traveled to get to an on site class does appear to affect students opinions over some items.

Did Participants' Place of Employment Significantly Affect Their Opinion of IHETS (T.V.) Delivered Classes, e.g. Post-Secondary Education Institutions, Secondary Education, Department of Corrections and Business/Industry/Government? (Tables 9, p. 35; 10, p. 37; 11, p. 39).

The results of Chi-Square comparing respondents who work in post-secondary education with respondents who work in secondary education and business, industry and

government yielded some significant results for all respondents. The number of Health and Safety and Education Administration subjects (N) employed in post-secondary education institutions was too low to make valid comparisons. All respondents reported ( $p < .05$ ) that they would consider a program delivered by IHETS if they were presently considering a program. Also, they would recommend a program in which many courses are offered on IHETS; they believe that students taking courses delivered by IHETS are satisfied; the institutional relationships between the IHETS faculty and staff and students are good; the advantages of IHETS delivered courses far outweigh the disadvantages, and that the outcomes of their educational goals depends upon IHETS delivered courses.

The post-secondary employed ITE respondents were significantly different ( $p < .05$ ) from all others. They reported that institutional relationships between faculty and students are good ( $p \leq .05$ ). Also, the outcomes of their educational goals depends upon IHETS delivered courses and the IHETS delivered courses saved them time and money.

All respondents employed in secondary education perceived four items different ( $p < .05$ ) from respondents employed in all other areas. Industrial Technology Education respondents employed in secondary education perceived four items significantly different ( $p < .05$ ) and Health and Safety perceived one item significantly different ( $p < .05$ ) e.g. The outcomes of my educational goals depends upon IHETS delivered courses.

### Conclusion

While the Industrial Technology Education responders employed in post-secondary education and secondary education perceived some items significantly different, and all responders perceived some items different; the evidence is insufficient to claim that "place

of employment" is a significant variable to cause one to perceive the IHETS delivery system different.

Did the Program In Which Participants Were Enrolled Affect Their Opinions of the IHETS Delivery System? (Table 12, p. 41)

A One-Way ANOV was used to determine whether or not the program in which participants were enrolled significantly affected their opinion of the IHETS delivery system at the .05 level of significance. A significance ( $p < .05$ ) was found for fourteen items. No significant difference was observed between ITE and HS except for one item. ITE and HS perceived significantly different the comfort they feel with the IHETS delivery system.

Both ITE and HS perceived eight of the fourteen items significantly different ( $p < .05$ ) different. ITE perceived nine of the fourteen items significantly different from EA, and HS perceived thirteen of the fourteen items significantly differently from EA.

Some of the items on which ITE and EA did not vary significantly and HS and EA did vary significantly are worth noting. ITE and EA perceived the following items in the same way (1) IHETS courses provide learning experiences equal to other courses, (2) interaction between/among students are equal, (3) methods used in IHETS courses are as effective as other courses, (4) likes and dislikes for IHETS courses balance each other, and (5) comfort in IHETS classes is equal to other classes. Nothing that ITE and EA participants have educational preparation in their experiences may account for the similar perception observed for these items.

Conclusion

The data generally does not support a statement that program enrollment significantly ( $p < .05$ ) affects participants perception of the IHETS Delivery System. However, as noted,

some items may have been judged differently because of educational experience rather than opinions of the overall IHETS Delivery System.

Subjects Self Rating of Support or Nonsupport for the IHETS Delivery System. (Table 13, p. 45).

Subjects rated themselves very high (85.5%) toward supporting the IHETS Delivery System. Only 7 (4.6%) rated themselves as nonsupportive and 15 (9.9%) rated themselves as neutral. Thirteen percent of the Education Administration (EA) responders rated themselves as nonsupportive; 4.8% of the Industrial Technology Education (ITE) responders, and 0.0% of the Health and Safety (HS) responders rated themselves as nonsupportive.

#### Conclusion

The data supports a conclusion that students who have taken IHETS delivered courses rate themselves as very supportive of the delivery system.

#### Recommendation

The results of these data support a conclusion that IHETS students believe that the IHETS delivery system is a viable alternative to traditional field based classes. The greatest area of concern was participants perception of the interactions among students and between students and the instructor. However, students did report that their instructors encouraged them to participate in class discussion. Therefore, the following recommendations are presented.

1. The IHETS delivery is perceived by students to be a viable delivery system and they desire to continue taking IHETS classes. Therefore, the delivery system should be expanded to include a greater number of classes and programs.

2. A concerted effort must be made to identify ways to increase interactions among students and between students and faculty.

### **Summary**

One hundred and fifty-two people who had taken one or more classes delivered on IHETS since the Fall 1987, participated in this study. Three hundred and sixty-five people enrolled in Education Administration, Industrial Technology Education, and Health and Safety were the population for this study.

Three hundred and sixty-five opinionnaires were mailed and thirty-one (8.49%) were not delivered; of the three hundred and thirty-four delivered, one hundred and fifty-two were returned (45.51%). The opinionnaire was a closed form instrument. Measures of Central Tendency, Chi-Square and One-Way Analysis of Variance (ANOV) were used to analyze the data.

The data supports a conclusion that the IHETS is a viable alternative to "traditional" off campus classes. Many responders (71%) reported that their educational goals depends on the IHETS delivery system. Responders believe that the IHETS delivery system should be used to sell the majors (86.9%) and they would recommend programs that are at least partially delivered by IHETS (87.5%).

The data supports a conclusion that IHETS courses provide learning experiences equal to other classes. However, subjects reported that interactions in the class need to be improved. Responders were positive about the methods and treatment students receive in the IHETS classes.

Subjects believe that their relationship with instructors and Indiana State University is very positive and that ISU has made a commitment to delivery quality programs.

Generally Males and Females did not perceive their experiences in IHETS classes significantly differently. However, the number of courses responders had taken affect their opinions over some items. Also, the distance subjects traveled to get to an on-site class appeared to affect some student's opinions over some items. On a self rating scale subjects rate themselves as very supportive of the IHETS delivery system.

The results from these data support a general conclusion that the IHETS delivery system is a viable alternative to traditional field based classes; IHETS should be continued.

## References

Simmons, I.V. (1991). Survey of student's attitudes toward the IHETS delivery system. Unpublished manuscript, Indiana State University, Industrial Technology Education Department, Terre Haute.

Simmons, I.V. (1991). User's opinions of T.V. (IHETS) classes. Unpublished opinionnaire, Indiana State University, Industrial Technology Education Department, Terre Haute.